

**REMARKS**

Claims 37, 38 and 40 are amended. Claims 37-38, 40 and 42-51 are pending in the application.

Claims 37-38, 40 and 42-51 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over various cited combinations of “Development of a submicrometer-grained microstructure in aluminum 6061 using equal channel angular extrusion” (*Development*); Metals Handbook page 15; Park, U.S. Patent No. 4,589,932; and “Stress-Relief Heat Treating of Steel” (*Stress-Relief*). The Examiner is reminded by direction to MPEP § 2143 that a proper obviousness rejection has the following three requirements: 1) there must be some suggestion or motivation to modify or combine reference teachings; 2) there must be a reasonable expectation of success; and 3) the combined references must teach or suggest all of the claim limitations. Claims 37-38, 40 and 42-51 are allowable over the various cited combinations of *Development*, Metals Handbook, Park and *Stress-Relief* for at least the reason that the references, individually or as combined, fail to disclose or suggest each and every limitation in any of those claims.

As amended, each of independent claims 37, 38 and 40 recite providing a cast material selected from the group consisting of high purity aluminum, high purity titanium, high purity copper, high purity tantalum, high purity nickel, high purity silver, high purity gold, high purity platinum, a tantalum alloy, a copper alloy, a titanium alloy, a nickel alloy, a silver alloy, a gold alloy, a platinum alloy, an alloy consisting essentially of aluminum and copper, and aluminum alloyed with at least one of tantalum, titanium, silver, gold, platinum and nickel. Each of independent claims 37, 38 and 40 additionally recites treating the cast material by processing including homogenization, hot forging, solutionizing and equal

channel angular extrusion. The amendment to claims 37, 38 and 40 is supported by the specification at, for example, page 1, lines 10-14; page 2, lines 6-7 and the claims as originally filed.

Park discloses specific processing of aluminum alloys containing silicon, magnesium, manganese and copper. *Development* is directed at developing a submicrometer grain structure in aluminum alloys and discloses specific processing of aluminum alloyed with magnesium and silicon. The Metals Handbook reference cited by the Examiner sets forth definitions of various metal working terms. *Stress Relief* discloses heat processing of steel. None of these references, or any combination thereof, discloses or suggests the combination of processing steps, the cast materials or the subjecting of the specified cast materials to the particular combination of processing events recited in any of claims 37, 38 and 40. Accordingly, independent claims 37, 38, and 40 are not rendered obvious by the various cited combinations of *Development*, Metals Handbook, Park and *Stress-Relief* and are allowable over these references.

Dependent claims 42-51 are allowable over the various cited combinations of *Development*, Metals Handbook, Park and *Stress-Relief* for at least the reason that they depend from corresponding allowable base claims 37, 38 and 40.

For the reasons discussed above, pending claims 37, 38, 40 and 42-51 are allowable. Accordingly, applicant respectfully requests formal allowance of such pending claims in the Examiner's next action.

Respectfully submitted,

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